

Application No.: 09/987,007
Amendment under 37 CFR 1.111
Reply to Office Action dated February 17, 2004
August 17, 2004

IN THE SPECIFICATION

Please substitute the paragraph beginning at page 1, line 28 and ending at page 2, line 1 to read as follows:

-- On the base 103, a coarse stage (X-stage) 117 is arranged adjacent to the disk ~~elump~~ clamp 109, to move magnetic heads 113 and 115 along an X-axis that is horizontal in FIG. 1. The coarse stage 117 is driven by an ultrasonic motor 119 along a ball screw (not shown) that extends along the X-axis. --

Please substitute the paragraph beginning at page 4, line 19 and ending at page 4, line 24 to read as follows:

-- Signals from the first information source, i.e., the linear encoders 240 and 242 indicate the position of the magnetic head 234 on the magnetic disk 231 and do not include a thermal drift. The moving range of the first information source is relatively wide to cover the whole area of the magnetic disk 231, and therefore, data from the first information source is used to move the magnetic head 234 from a one position to another. --

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Please substitute the paragraph beginning at page 5, line 16 and ending at page 5, line 22 to read as follows:

-- According to the related art of FIG. 5, the carriage 230 supports the magnetic head 234 and the inner and outer rings 233 and 235, and therefore, is heavy. The piezo-actuator 237 must drive such a heavy carriage 230. Load on the piezo-actuator 237 is very large, and it is difficult to speedily and accurately drive the piezo-actuator 237, i.e., the magnetic head 234. It is difficult for the related art to accurately control the position of the magnetic head 234. In addition, the piezo-actuator 237 itself is relatively heavy ~~to deteriorate~~ and this deteriorates the responsiveness thereof. --

Please substitute the paragraph beginning at page 15, line 17 and ending at page 15, line 22 to read as follows:

-- The laser head 217 and a detector 227 ~~dispose~~ are disposed above the reflective scale 222. The laser head 217 emits a laser beam 216 toward the reflective scale 222 and receives a reflected beam from the reflective scale 222. The detector 227 receives the output of the laser head 217 and a

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grating signal from the reflective scale 222, interpolates and divides the received signals, and provides a head position signal DET of high resolution. --

Please substitute the paragraphs beginning at page 27, line 2 and ending at page 27, line 13 to read as follows:

-- A magnetic disk tester has a head clamp (35, 218) to position a magnetic head (15, 289). The head clamp has a micromotion stage (55, 273) provided with a stage (59, 205) which is horizontally moved by a piezo-element (77). The magnetic head is attached to the piezo-stage (55, 273). On the head clamp (218), a reflective scale (222) is attached to a back face of the piezo-stage, and a laser head (217) is oriented toward the head clamp (218). According to a reflected laser beam from the reflective scale, the position of the magnetic head (289) is detected. An error signal indicating the difference between the detected position and a reference position is used to control the head clamp (218). The piezo-element can operate at high frequencies, to easily make the magnetic head trace a target track and improve the positioning accuracy of the magnetic head. --